

PRACTICE WORKSHEET**Lesson 8-1 - Geometric Mean**

Simplify each radical.

1. $\sqrt{144} = 12$

2. $\sqrt{50} = 5\sqrt{2}$

3. $\sqrt{\frac{81}{100}} = \frac{9}{10}$

4. $\frac{\sqrt{3}}{\sqrt{7}} = \frac{\sqrt{21}}{7}$

5. $\sqrt{\frac{49}{12}} = \frac{7\sqrt{3}}{6}$

6. $\frac{5}{\sqrt{5}} = \sqrt{5}$

7. $\frac{3}{\sqrt{121}} = \frac{3}{11}$

8. $\frac{6}{\sqrt{7}} = \frac{6\sqrt{7}}{7}$

Find the geometric mean of each pair of numbers.

9. 7 and 9 $\sqrt{63}$

10. 14 and 14 14

11. $2\sqrt{3}$ and $\sqrt{3}$ $\sqrt{6}$

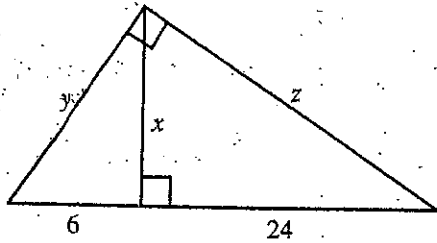
$\sqrt{63} = 9.7$

$\sqrt{14 \cdot 14}$

$\sqrt{2\sqrt{3} \cdot \sqrt{3}} = \sqrt{2\sqrt{9}}$
 $\sqrt{2 \cdot 3} = \sqrt{6}$

Find the indicated length.

12.



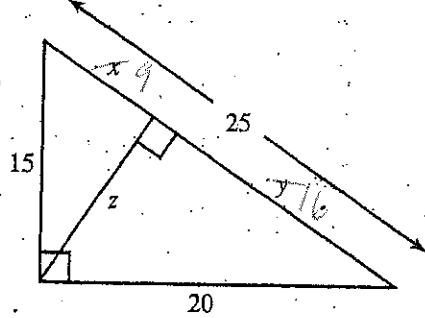
$x = 12$ $y = 6\sqrt{5}$ $z = 12\sqrt{5}$

$\frac{x}{6} = \frac{24}{x}$

$\frac{y}{6} = \frac{30}{y}$

$\frac{z}{24} = \frac{30}{z}$

13.



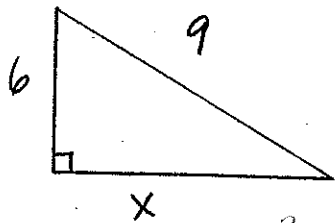
$x = 9$ $y = 16$ $z = 12$

$\frac{z}{9} = \frac{16}{z}$

$\frac{20}{25} = \frac{y}{20}$

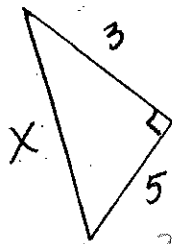
Find x

14.



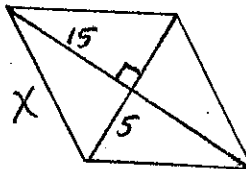
$6^2 + x^2 = 9^2$
 $x = 3\sqrt{5}$

15.



$3^2 + 5^2 = x^2$
 $x = \sqrt{34}$

16.



$5^2 + 15^2 = x^2$
 $x = 5\sqrt{10}$

(17)

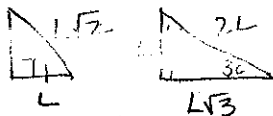
Does 3, 4, 5 form a right Δ ? yes

(18)

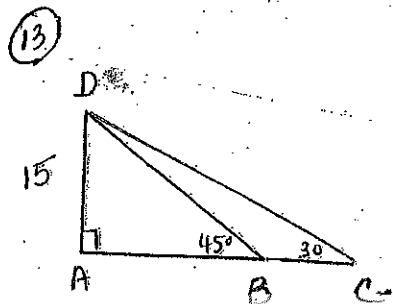
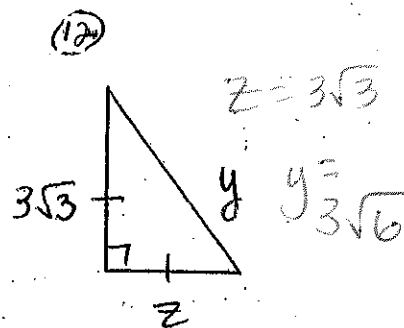
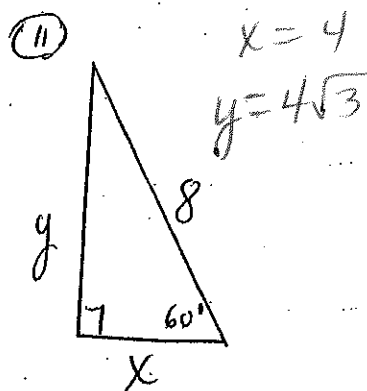
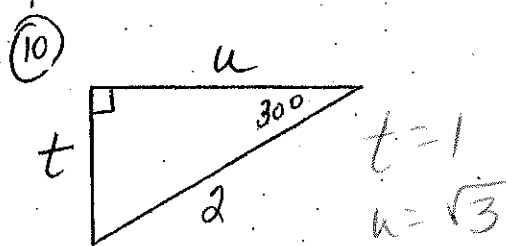
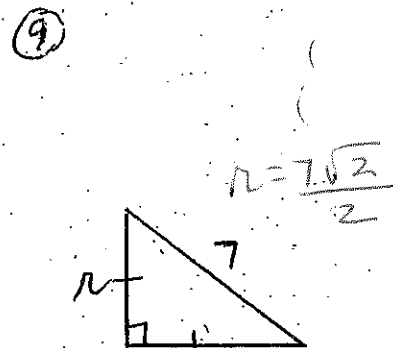
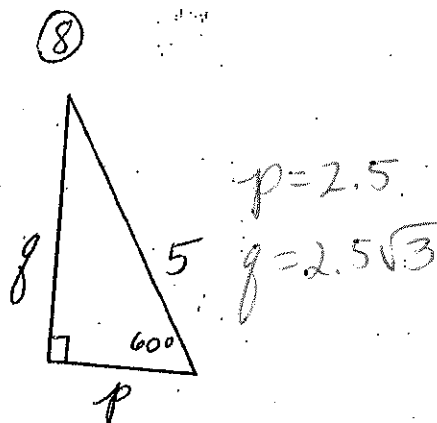
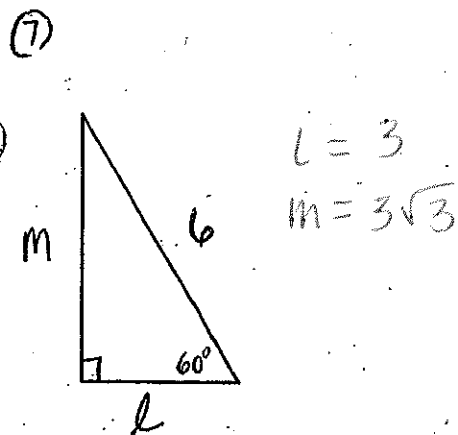
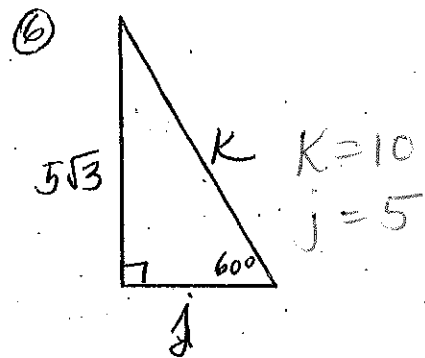
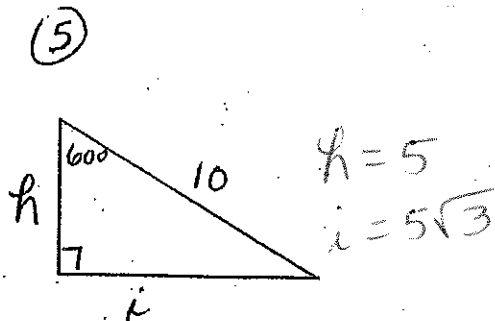
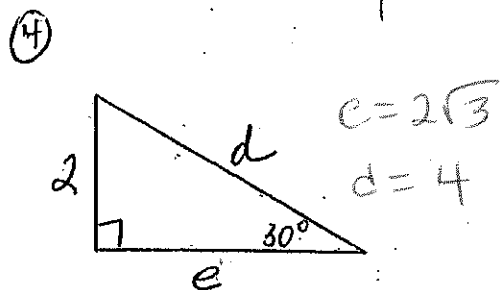
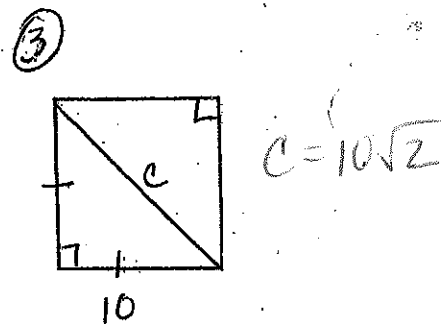
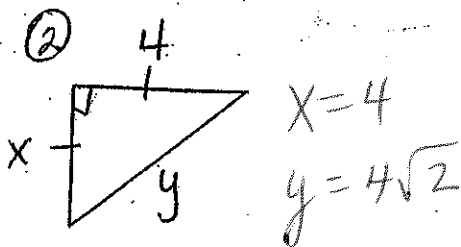
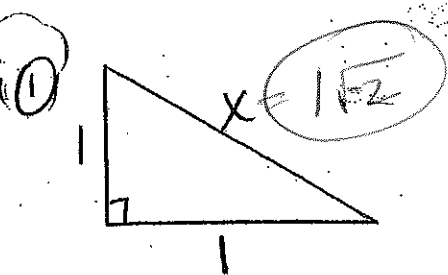
Does 23, 24, 25 form a right Δ ? no

CP Geometry

8.2 Special Rt. A's



Name _____



DA = 15 feet find
AB 15
DB $15\sqrt{2}$
AC $15\sqrt{3}$

BC $15\sqrt{3} - 15$
DC = 30